

## MobileWell100+ dataset overview

### Mobile data

**Table 0.1. Summary of data types, variables and instruments used in the mobile data collection.**

Data type	Variable	Instruments or Indicators
Sensor	Activity recognition	Detected physical activities
	Wifi	Connections to WiFi networks
	Connectivity	Type of connections with the network
	Light	Ambient light measurements
	Noise	Ambient noise measurements
	Screen	Smartphone screen status
Initial Survey	Participant's characteristics	Questions on socio-demographic and COVID-19 related data
	Psychological measures	International PANAS Short Form (I-PANAS-SF)
		General life satisfaction and seven domain of life
		Flourishing Scale (FS)
		Patient Health Questionnaire – 9 (PHQ-9)
		Generalized Anxiety Disorder Scale (GAD-7)
		Brief Resilience Scale (BRS)
		Acceptance And Action Questionnaire – II (AAQ-II)

Daily Survey	Affect	Valence
		Energetic Arousal
		Tense Arousal
	Emotional event	Report on any remarkable situations at the emotional level
Weekly Survey	Follow up variables	Questions on socio-demographic and COVID-19 related data
		General life satisfaction and seven domain of life

## External data

**Table 0.2. Summary of data categories, indicators and databases considered for the social welfare data collection.**

Category	Indicator	External database
Education	Level of education	MEFP
	Early school leavers	
	Young population neither studying nor working	
	Languages	INE
	Level of education in comparison with parents	
Income and material living conditions	Gross Domestic Product (GDP)	INE
	Average income and expenditure	
	At-risk-of-poverty rate	
	Tenancy regime of the dwelling	

	Household members and living space	
	Paid domestic service	
	Type of internet connection	
	Problems in the living area	
Health (COVID-19 data)	Cases	CNE
	Hospitalisations	
	ICU patients	
	Deaths	
Employment	Activity rate	INE
	Employment rate	
	Unemployment rate	
	Daily commuting time	
	Satisfaction with daily commuting time	
Social cohesion and protection	Unemployment benefits	SEPE
	Pensions	MISSM
	Unpaid external support	INE
	Social support	
Exogenous factors	Weather	AEMET

AEMET: Spanish State Meteorological Agency; CNE: Spanish National Epidemiology Centre; INE: Spanish Statistical Institute; MEFP: Spanish Ministry of Education and Training; MISSM: Spanish Ministry of Inclusion, Social Security and Migration; SEPE: Spanish Public Employment Service.

# MobileWell100+ dataset description

## Mobile Data

**Table 1.1. Summary of sensor data and number of records gathered.**

Sensor	Description	Participants	Records
activity recognition	Physical activities detected	100	5914520
wifi	Events of connections to WiFi networks	102	776996
connectivity	Type of connections with the network	102	200335
light	Ambient light measurements <sup>1</sup>	101	820339
noise	Ambient noise measurements <sup>2</sup>	58	186488
screen	Events of changes in the smartphone screen state	102	283504

<sup>1</sup> All light measurements are given in 'lux' units. <sup>2</sup> All noise measurements are given in 'dB' units.

**Table 1.2. Summary of each survey and number of records gathered.**

Survey	Trigger frequency	Content	Participants	Records
Initial	Once, when the participant starts the study	9 questions including demographic, situational, socioeconomic and contextual information (Table 2.1)	103	103
		7 questionnaires (54 questions in total) about well-being indicators (Table 2.2)		
Daily	Six times per day	4 questions rating affect and the possible experience of an emotional event (Table 3)	103	14431

Weekly	Every Tuesday	12 questions on health, socioeconomic and life satisfaction status during the last week (Table 4)	94	262
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**Table 2.1. Initial survey about socio-demographic and COVID-19 related data**

Question	Response options
Gender	One of {'Female', 'Male', 'Other'}
Age	Integer (>=18)
Postcode	Integer
Annual net income	One of {'Less than 12450€', '12450 to 20200€', '20200 to 35200€', '35200 to 60000€', 'More than 60000€'}
Regarding COVID-19	One of {'I don't have symptoms', 'I have symptoms but have not been diagnosed', 'I am diagnosed'}
Current employment status	One of {'Employed', 'Self-employed', 'Unemployed', 'Student', 'Retired', 'Other'}
Impact of the crisis on your employment situation	One of {'Not changed', 'Teleworking exclusive', 'Teleworking partial', 'Reduced workday', 'Increased workday', 'Temporary Employment Regulation (ERTE)', 'Fired', 'New employment', 'Other'}
How many hours of physical activity did you get weekly?	One of {'Less than 2', '2 to 4', '4 to 6', '6 to 8', 'More than 8'}
Regarding COVID-19 vaccination	One of {'I am not vaccinated', 'I am missing a dose of vaccine', 'I am fully vaccinated'}

**Table 2.2. Initial survey about well-being indicators**

Question	Response options
<p><b>International PANAS Short Form (10 items)</b>                      Thinking about yourself and how you normally feel, to what extent do you generally feel:                      IPSF_1: "Upset"                      IPSF_2: "Hostile"                      IPSF_3: "Alert"                      IPSF_4: "Ashamed"                      IPSF_5: "Inspired"                      IPSF_6: "Nervous"                      IPSF_7: "Determined"                      IPSF_8: "Attentive"                      IPSF_9: "Afraid"                      IPSF_10: "Active"</p>	<p>One of {'1', '2', '3', '4', '5'}, where '1' refers to "Never" and '5' to "Always"</p>
<p><b>General Life Satisfaction plus satisfaction in 7 life domains</b>                      In general, how satisfied are you with:                      GLS: "your life?"                      RELAT_LS: "your personal relationships?"                      WORK_LS: "your work situation?"                      FINAN_LS: "your financial situation?"                      TIME_LS: "your free time?"                      PHYS_LS: "your physical health?"                      MENT_LS: "your mental health?"                      AREA_LS: "the area where you live?"</p>	<p>One of {'1', '2', '3', '4'}, where '1' refers to "Very Dissatisfied" and '4' to "Very Satisfied"</p>
<p><b>Flourishing Scale (8 items)</b>                      Below are eight statements with which you may agree or disagree.                      FS_1: "I lead a purposeful and meaningful life"                      FS_2: "My social relationships are supportive and rewarding"                      FS_3: "I am engaged and interested in my daily activities"                      FS_4: "I actively contribute to the happiness and well-being of others"                      FS_5: "I am competent and capable in the activities that are important to me"                      FS_6: "I am a good person and live a good life"                      FS_7: "I am optimistic about my future"</p>	<p>One of {'1', '2', '3', '4', '5', '6', '7'}, where '1' refers to "Strongly disagree" and '7' to "Strongly agree"</p>

<p>FS_8: "People respect me"</p>	
<p><b>Patient Health Questionnaire – 9 (9 items)</b>  Over the last 2 weeks, how often have you been bothered by any of the following problems?  PHQ_1: "Little interest or pleasure in doing things"  PHQ_2: "Feeling down, depressed, or hopeless"  PHQ_3: "Trouble falling or staying asleep, or sleeping too much"  PHQ_4: "Feeling tired or having little energy"  PHQ_5: "Poor appetite or overeating"  PHQ_6: "Feeling bad about yourself - or that you are a failure or have let yourself or your family down"  PHQ_7: "Trouble concentrating on things, such as reading the newspaper or watching television"  PHQ_8: "Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual"  PHQ_9: "Thoughts that you would be better off dead or of hurting yourself in some way"</p>	<p>One of {'0', '1', '2', '3'}, where '0' refers to "Not at all" and '3' to "Nearly every day"</p>
<p><b>Generalized Anxiety Disorder Scale – 7 (7 items)</b>  Over the last 2 weeks, how often have you been bothered by any of the following problems?  GAD_1: "Feeling nervous, anxious or on edge"  GAD_2: "Not being able to stop or control worrying"  GAD_3: "Worrying too much about different things"  GAD_4: "Trouble relaxing"  GAD_5: "Being so restless that it is hard to sit still"  GAD_6: "Becoming easily annoyed or irritable"  GAD_7: "Feeling afraid as if something awful might happen"</p>	<p>One of {'0', '1', '2', '3'}, where '0' refers to "Not at all" and '3' to "Nearly every day"</p>
<p><b>Brief Resilience Scale (6 items)</b>  Please indicate the extent to which you agree with each of the following statements by using the following scale.  BRS_1: "I tend to bounce back quickly after hard times"  BRS_2: "I have a hard time making it through stressful events"  BRS_3: "It does not take me long to recover from a stressful event"  BRS_4: "It is hard for me to snap back when something bad happens"  BRS_5: "I usually come through difficult times with little trouble"  BRS_6: "I tend to take a long time to get over set-backs in my life"</p>	<p>One of {'1', '2', '3', '4', '5'}, where '1' refers to "Strongly disagree" and '5' to "Strongly agree"</p>

<p><b>Acceptance and Action Questionnaire – II (7 items)</b></p> <p>Below you will find a list of statements. Please rate how true each statement is for you by selecting a number next to it. Use the scale below to make your choice.</p> <p>AAQ_1: “My painful experiences and memories make it difficult for me to live a life that I would value”</p> <p>AAQ_2: “I’m afraid of my feelings”</p> <p>AAQ_3: “I worry about not being able to control my worries and feelings”</p> <p>AAQ_4: “My painful memories prevent me from having a fulfilling life”</p> <p>AAQ_5: “Emotions cause problems in my life”</p> <p>AAQ_6: “It seems like most people are handling their lives better than I am”</p> <p>AAQ_7: “Worries get in the way of my success”</p>	<p>One of {‘1’, ‘2’, ‘3’, ‘4’, ‘5’, ‘6’, ‘7’}, where ‘1’ refers to “Never true” and ‘7’ to “Always true”</p>
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**Table 3. Daily survey**

Question	Response options
How do you feel right now?	Visual Analogue Scale ranging from ‘Very bad’ to ‘Very good’
How do you feel right now?	Visual Analogue Scale ranging from ‘Very tired’ to ‘Very awake’
How do you feel right now?	Visual Analogue Scale ranging from ‘Very calm to ‘Very restless’
Since your last registration, have you experienced any remarkable situations on an emotional level?	Visual Analogue Scale ranging from ‘Yes, very unpleasant’ to ‘Yes, very pleasant’, with ‘No’ as the midpoint

**Table 4. Weekly survey**

Question	Response options
Regarding COVID-19 health status (in the last week)	One of {'I don't have symptoms', 'I have symptoms but have not been diagnosed', 'I am diagnosed'}
Current employment status	One of {'Employed', 'Self-employed', 'Unemployed', 'Student', 'Retired', 'Other'}
Impact of the crisis on your employment situation (in the last week)	One of {'Not changed', 'Teleworking exclusive', 'Teleworking partial', 'Reduced workday', 'Increased workday', 'Temporary Employment Regulation (ERTE)', 'Fired', 'New employment', 'Other'}
How many hours of physical activity did you get during the last week?	One of {'Less than 2', '2 to 4', '4 to 6', '6 to 8', 'More than 8'}
Regarding COVID-19 vaccination (in the last week)	One of {'I am not vaccinated', 'I am missing a dose of vaccine', 'I am fully vaccinated'}
During the last week, how satisfied have you been with the following aspects of your life? <ul style="list-style-type: none"> <li>- your personal relationships</li> <li>- your work situation</li> <li>- your financial situation</li> <li>- your free time</li> <li>- your physical health</li> <li>- your mental health</li> <li>- the area where you live</li> </ul>	One of {'1', '2', '3', '4'}, where '1' refers to "Very Dissatisfied" and '4' to "Very Satisfied"

## External Data

**Table 5. Summary of the welfare data obtained from the external databases**

Category	Indicator	Indicator name	Description	Location	Time period	External database
Education	Level of education	level_education	Percentage of people (25-64 years old) by level of education ('Lower upper secondary education', 'Upper secondary education', 'Higher education'), by sex and age.	Spanish autonomous community and autonomous cities in North Africa	Annual 2021	MEFP
	Early school leavers	early_school_leavers	Percentage of people (18-24 years old) who have not completed upper secondary education and are not in any form of education and training, by sex.			
	Young population neither studying nor working	neither_studying_nor_working	Percentage of young people (15-29 years) neither studying nor working, by level of education attained ("lower secondary education", "upper secondary and tertiary education") and by sex.			
	Languages	languages	Number of people (2 years and over) by number of languages ('None', 'One language', 'Two languages', 'Three languages', 'Four and more languages'), by type of language use ('Understand', 'Read', 'Speak', 'Write'), by sex and age.	Spanish province and autonomous cities in North Africa		INE
	Level of education in comparison with parents	education_parents	Number of people (16 years and over) by level of education compared to parents ('Lower level of education than parents', 'Same level of education as parents', 'Higher level of education than parents'), by sex and age.			
Income and material living conditions	Gross Domestic Product (GDP)	gpd	GDP per capita in Euros and annual GDP growth rates.	Spanish autonomous community and autonomous cities in North Africa	Annual 2021	INE
	Average income and expenditure	income_expenditure	Average income and average expenditure in Euros per household and per person.			
	At-risk-of-poverty rate	risk_poverty_rate	Percentage of people living below the poverty line.			

	Tenancy regime of the dwelling	tenancy_regime_dwelling	Number of people by tenancy regimen of the dwelling ('Owned by inheritance or donation', 'Owned, by purchase, fully paid for', 'Owned, by purchase, with outstanding payments (mortgages)', 'Rented', 'Given for free or at a low price (by another household, paid for by the company...)', 'Other form'), by net monthly income level.	Spanish province and autonomous cities in North Africa		
	Household members and living space	household_members_living_space	Number of households by the number of people living in the household and the usable floor area of the dwelling.			
	Paid domestic service	paid_domestic_service	Number of people with and without paid domestic service, by net monthly income level.			
	Type of internet connection	internet_connection	Number of households by type of internet connection ('Fixed connection', 'Mobile connection', 'Fixed and mobile connection', 'No connection'), by net monthly income level.			
	Problems in the living area	problems_living_area	Percentage of households by type of problem in the area where it is located('External noise', 'Pollution or bad smells', 'Poor street cleanliness', 'Poor communications', 'Few green areas', 'Crime', 'Nuisance related to tourist activities or hotel and catering establishments', by net monthly income level.			
Health (COVID-19 data)	Cases	covid_data	Number of reported cases confirmed with a positive diagnostic test for active infection (PDIA) as set out in the COVID-19 Early Detection, Surveillance and Control Strategy and in addition cases reported before 11 May that required hospitalisation, ICU admission or died with a clinical diagnosis of COVID-19, according to the case definitions in force at the time, by sex and age.	Spanish province and autonomous cities in North Africa	Every day from 14/11/2021 to 16/12/2021	CNE
	Hospitalisations		Number of hospitalised cases, by sex and age.			
	ICU patients		Number of cases admitted to ICU, by sex and age.			
	Deaths		Number of deaths, by sex and age.			
Employment	Activity rate	employment_rates	Ratio between the total number of active* people and the population aged 16 and over (*Active people comprise employed and unemployed persons during	Spanish province and	Fourth quarter 2021	INE

			the reference week, according to International Labour Organisation (ILO) criteria), by sex.	autonomous cities in North Africa	Annual 2021	
	Employment rate		Ratio of total employed* persons to population aged 16 and over (*Employed persons are all persons aged 16 years and over who, according to ILO criteria, during the reference week were employed, in paid employment or self-employed, self-employed workers), by sex.			
	Unemployment rate		Ratio between the number of unemployed* and the number of active people (*Unemployed persons are all persons aged 16 and over who, according to ILO criteria, during the reference week, were not in paid employment or self-employment, available for work and actively seeking work), by sex.			
	Daily commuting time	commuting_time	Number of people (16 years and over) by daily commuting time to work/study, by sex and age.			
	Satisfaction with daily commuting time	satisfaction_commuting_time	Number of people by degree of satisfaction with commuting time ('Dissatisfied', 'Satisfied', 'Very satisfied'), by sex and age.			
Social cohesion and protection	Unemployment benefits	unemployment_benefits	Number of people (16 years and over) on unemployment benefits, by sex and age.	Spanish province, autonomous community and autonomous cities in North Africa	Monthly (November and December 2021) and average 2021	SEPE
	Pensions	pensions	Number of pensions and average amount received, by sex.			MISSM
	Unpaid external support	unpaid_external_support	Number of people by the unpaid external support they have ('Yes, with support from family, relatives, friends, neighbours', 'Yes, with support from others, e.g. social services or an NGO', 'No unpaid external support'), by net monthly income level.	Spanish province and autonomous cities in North Africa	Annual 2021	INE
	Social support	social_support	Number of people (16 years and over) with and without social support, by sex and age.			

Exogenous factors	Weather	weather_data	Information on weather conditions (temperature, precipitation, wind, sunshine hours, pressure)	Spanish province and autonomous cities in North Africa	Every day from 14/11/2021 to 16/12/2021	AEMET
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AEMET: Spanish State Meteorological Agency; CNE: Spanish National Epidemiology Centre; INE: Spanish Statistical Institute; MEFP: Spanish Ministry of Education and Training; MISSM: Spanish Ministry of Inclusion, Social Security and Migration; SEPE: Spanish Public Employment Service.

## MobileWell100+ dataset records (files)

### Mobile data

**Table 6.1. Description of the file activity\_recognition.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Time when the recognised activity is registered	Datetime	YYYY-MM-DD HH:MM:SS
label	Recognised activity	String	One of {'still', 'tilting', 'on_foot', 'in_vehicle', 'on_bicycle'}
confidence	The confidence of the recognised activity	Integer	0 to 100
timestamp.UTC	Time when the recognised activity is registered	UTC	

**Table 6.2. Description of the file wifi.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Time when the WiFi scan is registered	Datetime	YYYY-MM-DD HH:MM:SS
ssid	Name of the WiFi network detected	String	
bssid	MAC address of the access point detected	String	XX:XX:XX:XX:XX:XX
timestamp.UTC	Time when the WiFi is registered	UTC	

**Table 6.3. Description of the file connectivity.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Timestamp when the connectivity status is registered	Datetime	YYYY-MM-DD HH:MM:SS
connectivity_status	Device connectivity status	String	One of {'wifi', 'mobile', 'none'}
timestamp_UTC	Time when the connectivity status is registered	UTC	

**Table 6.4. Description of the file light.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Time when the measured light is registered	Datetime	YYYY-MM-DD HH:MM:SS
max_lux	Maximum light value detected during the sampling	Float	
min_lux	Minimum light value detected during the sampling	Float	
std_lux	Standard deviation of the light values detected during the sampling	Float	
mean_lux	Mean of the light values detected during the sampling	Float	
timestamp_UTC	Time when the measured light is registered	UTC	

**Table 6.5. Description of the file noise.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Time when the noise is registered	Datetime	YYYY-MM-DD HH:MM:SS
max_decibel	Maximum noise value detected during the sampling	Float	
min_decibel	Minimum noise value detected during the sampling	Float	
std_decibel	Standard deviation of the noise values detected during the sampling	Float	
mean_decibel	Mean of the noise values detected during the sampling	Float	
timestamp.UTC	Time when the noise is registered	UTC	

**Table 6.6. Description of the file screen.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Timestamp when the screen event is registered	Datetime	YYYY-MM-DD HH:MM:SS
screen_event	Screen event	String	One of {'SCREEN_ON', SCREEN_OFF, 'SCREEN_UNLOCKED'}
timestamp.UTC	Timestamp when the screen event is registered	UTC	

**Table 7. Description of the file initial\_survey.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Timestamp when the survey is registered	Datetime	YYYY-MM-DD HH:MM:SS
gender	Gender of the participant	String	One of {'female', 'male', 'other'}
age	Age of the participant	Integer	18 to 100
postcode	Postcode of the participant	Integer	
income	Annual net income of the participant coded in 5 possible ranges (in euros)	String	One of {'0-12450', '12450-20200', '20200-35200', '35200-60000', '60000+'}
covid	COVID-19 health status in the participant	String	One of {'no', 'not_diagnosed', 'diagnosed'}
current_employment	Current employment status of the participant	String	One of {'employed', 'self-employed', 'unemployed', 'student', 'retired', 'other'}
employment_impact	Change in the employment situation of the participant as a result of the crisis	String	One of {'same', 'telework_exclusive', 'telework_partial', 'reduced', 'increased', 'erte', 'fired', 'new', 'other'}
physical_activity	Number of hours dedicated to physical activity by the participant weekly	String	One of {'0-2', '2-4', '4-6', '6-8', '8+'}
covid_vaccine	COVID-19 vaccination schedule in the participant	String	One of {'no', 'incomplete', 'complete'}
IPSF_1 – IPSF_10	International-PANAS-Short Form (10 items)	String	One of {'1', '2', '3', '4', '5'}
GLS	General life satisfaction	String	One of {'1', '2', '3', '4'}
RELAT_LS	Satisfaction with personal relationships	String	One of {'1', '2', '3', '4'}
WORK_LS	Satisfaction with work situation	String	One of {'1', '2', '3', '4'}
FINAN_LS	Satisfaction with financial situation	String	One of {'1', '2', '3', '4'}
TIME_LS	Satisfaction with free time	String	One of {'1', '2', '3', '4'}

PHYS_LS	Satisfaction with physical health	String	One of {'1', '2', '3', '4'}
MENT_LS	Satisfaction with mental health	String	One of {'1', '2', '3', '4'}
AREA_LS	Satisfaction with the area where one lives	String	One of {'1', '2', '3', '4'}
FS_1 – FS_8	Flourishing Scale (8 items)	String	One of {'1', '2', '3', '4', '5', '6', '7'}
PHQ_1 – PHQ_9	Patient Health Questionnaire (9 items)	String	One of {'0', '1', '2', '3'}
GAD_1 – GAD_7	Generalized Anxiety Disorder Scale (7 items)	String	One of {'0', '1', '2', '3'}
BRS_1 – BRS_6	Brief Resilience Scale (6 items)	String	One of {'1', '2', '3', '4', '5'}
AAQ_1 – AAQ_7	Acceptance and Action Questionnaire-II (7 items)	String	One of {'1', '2', '3', '4', '5', '6', '7'}
survey_start_timestamp	Time when the survey was opened	Datetime	YYYY-MM-DD HH:MM:SS
survey_end_timestamp	Time when the survey was sent	Datetime	YYYY-MM-DD HH:MM:SS
sociodemographic_questionnaire_start_timestamp	Time when the sociodemographic questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
gender_answer_timestamp	Time when the gender question is answered	Datetime	YYYY-MM-DD HH:MM:SS
age_answer_timestamp	Time when the age question is answered	Datetime	YYYY-MM-DD HH:MM:SS
postcode_answer_timestamp	Time when the postcode question is answered	Datetime	YYYY-MM-DD HH:MM:SS
income_answer_timestamp	Time when the income question is answered	Datetime	YYYY-MM-DD HH:MM:SS
covid_questionnaire_start_timestamp	Time when the covid questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
covid_answer_timestamp	Time when the covid question is answered	Datetime	YYYY-MM-DD HH:MM:SS

current_employment_answer_timestamp	Time when the employment question is answered	Datetime	YYYY-MM-DD HH:MM:SS
employment_impact_answer_timestamp	Time when the employment impact question is answered	Datetime	YYYY-MM-DD HH:MM:SS
physical_activity_answer_timestamp	Time when the physical activity question is answered	Datetime	YYYY-MM-DD HH:MM:SS
covid_vaccine_answer_timestamp	Time when the covid vaccine question is answered	Datetime	YYYY-MM-DD HH:MM:SS
IPSF_questionnaire_start_timestamp	Time when the IPSF questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
IPSF_1_answer_timestamp – IPSF_10_answer_timestamp	Time when the IPSF_1 – IPSF_10 question are answered	Datetime	YYYY-MM-DD HH:MM:SS
LS_questionnaire_start_timestamp	Time when the LS questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
GLS_answer_timestamp	Time when the GLS question is answered	Datetime	YYYY-MM-DD HH:MM:SS
RELAT_LS_answer_timestamp	Time when the RELAT_LS question is answered	Datetime	YYYY-MM-DD HH:MM:SS
WORK_LS_answer_timestamp	Time when the WORK_LS question is answered	Datetime	YYYY-MM-DD HH:MM:SS
FINAN_LS_answer_timestamp	Time when the FINAN_LS question is answered	Datetime	YYYY-MM-DD HH:MM:SS
TIME_LS_answer_timestamp	Time when the TIME_LS question is answered	Datetime	YYYY-MM-DD HH:MM:SS
PHYS_LS_answer_timestamp	Time when the PHYS_LS question is answered	Datetime	YYYY-MM-DD HH:MM:SS
MENT_LS_answer_timestamp	Time when the MENT_LS question is answered	Datetime	YYYY-MM-DD HH:MM:SS

AREA_LS_answer_timestamp	Time when the AREA_LS question is answered	Datetime	YYYY-MM-DD HH:MM:SS
FS_questionnaire_start_timestamp	Time when the FS questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
FS_1_answer_timestamp – FS_8_answer_timestamp	Time when the FS1 – FS_8 question are answered	Datetime	YYYY-MM-DD HH:MM:SS
PHQ_questionnaire_start_timestamp	Time when the PHQ questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
PHQ_1_answer_timestamp – PHQ_9_answer_timestamp	Time when the PHQ_1 – PHQ_9 question are answered	Datetime	YYYY-MM-DD HH:MM:SS
GAD_questionnaire_start_timestamp	Time when the GAD questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
GAD_1_answer_timestamp – GAD_7_answer_timestamp	Time when the IPSF_1 – IPSF_10 question are answered	Datetime	YYYY-MM-DD HH:MM:SS
BRS_questionnaire_start_timestamp	Time when the BRS questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
BRS_1_answer_timestamp – BRS_6_answer_timestamp	Time when the BRS_1 – BRS_6 question are answered	Datetime	YYYY-MM-DD HH:MM:SS
AAQ_questionnaire_start_timestamp	Time when the AAQ questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
AAQ_1_answer_timestamp – AAQ_7_answer_timestamp	Time when the AAQ_1 – AAQ_7 question are answered	Datetime	YYYY-MM-DD HH:MM:SS

'timestamp.UTC'	Timestamp when the survey is registered	UTC	
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**Table 8. Description of the file daily\_survey.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Timestamp when the survey is registered	Datetime	YYYY-MM-DD HH:MM:SS
valence	Current valence rating	Integer	-50 to 50
energetic_arousal	Current energetic arousal rating	Integer	0 to 100
tense_arousal	Current tense arousal rating	Integer	0 to 100
emotional_event	Experience or non-experience of an emotional event and its intensity	Integer	-50 to 50
occasion	Order of the daily questionnaire for a given day	String	One of {'1', '2', '3', '4', '5', '6'}
survey_start_timestamp	Time when the survey was opened	Datetime	YYYY-MM-DD HH:MM:SS
survey_end_timestamp	Time when the survey was sent	Datetime	YYYY-MM-DD HH:MM:SS
questionnaire_start_timestamp	Time when the questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
valence_answer_timestamp	Time when the valence question was answered	Datetime	YYYY-MM-DD HH:MM:SS
energetic_arousal_answer_timestamp	Time when the energetic arousal question was answered	Datetime	YYYY-MM-DD HH:MM:SS
tense_arousal_answer_timestamp	Time when the tense arousal question was answered	Datetime	YYYY-MM-DD HH:MM:SS

emotional_event_answer_timestamp	Time when the emotional event question was answered	Datetime	YYYY-MM-DD HH:MM:SS
timestamp.UTC	Timestamp when the survey is registered	UTC	

**Table 9. Description of the file weekly\_survey.csv**

Variable name	Description	Type	Values
participant	Unique identifier of the participant	String	
timestamp	Timestamp when the survey is registered	Datetime	YYYY-MM-DD HH:MM:SS
covid	COVID-19 health status in the participant in the last week	String	One of {'no', 'not_diagnosed', 'diagnosed'}
current_employment	Current employment status of the participant	String	One of {'employed', 'self-employed', 'unemployed', 'student', 'retired', 'other'}
employment_impact	Changes in employment status during the last week	String	One of {'same', 'telework_exclusive', 'telework_partial', 'reduced', 'increased', 'erte', 'fired', 'new', 'other'}
physical_activity	Number of hours dedicated to physical activity by the participant during the last week	String	One of {'0-2', '2-4', '4-6', '6-8', '8+'}
covid_vaccine	COVID-19 vaccination schedule in the participant in the last week	String	One of {'no', 'incomplete', 'complete'}
RELAT_LS	Life satisfaction with personal relationships in the last week	String	One of {'1', '2', '3', '4'}
WORK_LS	Life satisfaction with work situation in the last week	String	One of {'1', '2', '3', '4'}
FINAN_LS	Life satisfaction with financial situation in the last week	String	One of {'1', '2', '3', '4'}
TIME_LS	Life satisfaction with free time in the last week	String	One of {'1', '2', '3', '4'}
PHYS_LS	Life satisfaction with physical health in the last week	String	One of {'1', '2', '3', '4'}
MENT_LS	Life satisfaction with mental health in the last week	String	One of {'1', '2', '3', '4'}

AREA_LS	Life satisfaction with the area where one lives in the last week	String	One of {'1', '2', '3', '4'}
survey_start_timestamp	Time when the survey was opened	Datetime	YYYY-MM-DD HH:MM:SS
survey_end_timestamp	Time when the survey was sent	Datetime	YYYY-MM-DD HH:MM:SS
covid_questionnaire_start_timestamp	Time when the covid questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
covid_answer_timestamp	Time when the covid question was answered	Datetime	YYYY-MM-DD HH:MM:SS
current_employment_answer_timestamp	Time when the current_employment question was answered	Datetime	YYYY-MM-DD HH:MM:SS
employment_impact_answer_timestamp	Time when the employment_impact question was answered	Datetime	YYYY-MM-DD HH:MM:SS
physical_activity_answer_timestamp	Time when the physical_activity question was answered	Datetime	YYYY-MM-DD HH:MM:SS
covid_vaccine_answer_timestamp	Time when the covid_vaccine question was answered	Datetime	YYYY-MM-DD HH:MM:SS
LS_questionnaire_start_timestamp	Time when the LS questionnaire started	Datetime	YYYY-MM-DD HH:MM:SS
RELAT_LS_answer_timestamp	Time when the RELAT_LS question was answered	Datetime	YYYY-MM-DD HH:MM:SS
WORK_LS_answer_timestamp	Time when the WORK_LS question was answered	Datetime	YYYY-MM-DD HH:MM:SS
FINAN_LS_answer_timestamp	Time when the FINAN_LS question was answered	Datetime	YYYY-MM-DD HH:MM:SS
TIME_LS_answer_timestamp	Time when the TIME_LS question was answered	Datetime	YYYY-MM-DD HH:MM:SS

PHYS_LS_answer_timestamp	Time when the PHYS_LS question was answered	Datetime	YYYY-MM-DD HH:MM:SS
MENT_LS_answer_timestamp	Time when the MENT_LS question was answered	Datetime	YYYY-MM-DD HH:MM:SS
AREA_LS_answer_timestamp	Time when the AREA_LS question was answered	Datetime	YYYY-MM-DD HH:MM:SS
timestamp.UTC	Timestamp when the survey is registered	UTC	

## External data

**Tables 10.1. Description of the file level\_education.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Age	Age of the participant	String	One of {'25-64 years old'; '25-34 years old'; '35-44 years old'; '45-54 years old'; '55-64 years old'}
Level of education	Level of education attained	String	One of {'Lower upper secondary education'; 'Upper secondary education'; 'Higher education'}
Percentage of people	Percentage of people by their level of education	Float	

**Tables 10.2. Description of the file early\_school\_leavers.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Early school leavers	Percentage of people who are early school leavers	Float	

**Tables 10.3. Description of the file neither\_studying\_nor\_working.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Level of education	Level of education attained	String	One of {'Lower upper secondary education'; 'Upper secondary education and Higher education'; 'Total'}
Total	Percentage of young people who neither studying nor working	Float	

**Tables 10.4. Description of the file languages.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names

Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Age	Age of the participant	String	One of {'Less than 20 years old'; '20 to 39 years old'; '40 to 59 years old'; '60 and over'; 'Total'}
Type of use	Type of use	String	One of {'Understand'; 'Read'; 'Speak'; 'Write'}
Number of language	Number of language	String	One of {'None'; 'One language'; 'Two languages'; 'Three languages'; 'Four or more languages'; 'Total'}
Total	Number of people according to the number of languages they know and the type of use they make of these languages	Float	

**Tables 10.5. Description of the file education\_parents.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Age	Age of the participant	String	One of {'Less than 25 years old'; '25 to 44 years old'; '45 to 64 years old'; '65 and over'; 'Total'}
Level of education compared to parents	Level of education compared to parents	String	One of {'Lower level of education than parents'; 'Same level of education as parents'; 'Higher level of education than parents'; 'Total'}
Total	Number of people according to level of education compared to their parents	Float	

**Tables 10.6. Description of the file gdp.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
GDP per inhabitant	Gross Domestic Product per inhabitant (€)	Float	
Annual GDP growth	Annual GDP growth rate	Float	

**Tables 10.7. Description of the file income\_expenditure.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
Average household income	Average household income (€)	Float	
Average income per person	Average income per person (€)	Float	
Average expenditure per household	Average expenditure per household (€)	Float	
Average expenditure per person	Average expenditure per person (€)	Float	

**Tables 10.8. Description of the file risk\_poverty\_rate.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
At risk of poverty rate	Percentage of people living below the poverty line	Float	

**Tables 10.9. Description of the file tenancy\_regime\_dwelling.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Net monthly income level	Net monthly income level	String	One of {'Less than 1.000 euros'; 'From 1.000 euros to less than 1.500 euros'; 'From 1.500 euros to less than 2.000 euros'; 'From 2.000 euros to less than 3.000 euros'; 'From 3.000 euros or more'; 'Total'}
Tenancy regime of the dwelling	Tenancy regime of the dwelling	String	One of {'Owned by inheritance or donation'; 'Owned, by purchase, fully paid for'; 'Owned, by purchase, with outstanding payments (mortgages)'; 'Rented'; 'Given for free or at a low price (by another household, paid for by the company...)'; 'Other form'; 'Total'}
Total	Number of people according to tenure status of their dwelling	Integer	

**Tables 10.10. Description of the file household\_members\_living\_space.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Household members	Number of household members	String	One of {'1 person'; '2 persons'; '3 persons'; '4 persons'; '5 persons or more'; 'Total'}
Living space	Living space	String	One of {'Up to 30 m2'; 'Between 31 and 45 m2'; 'Between 46 and 60 m2'; 'Between 61 and 75 m2'; 'Between 76 and 90 m2'; 'Between 91 and 105 m2'; 'Between 106 and 120 m2'; 'Between 121 and 150 m2'; 'Between 151 and 180 m2'; 'More than 180 m2'; 'Total'}
Total	Number of households according to number of members and living space	Integer	

**Tables 10.11. Description of the file paid\_domestic\_service.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Net monthly income level	Net monthly income level	String	One of {'Less than 500 euros'; 'From 500 euros to less than 1.000 euros'; 'From 1.000 euros to less than 1.500 euros'; 'From 1.500 euros to less than 2.000 euros'; 'From 2.500 euros to less than 3.000 euros'; 'From 3.000 euros to less than 5.000 euros'; 'From 5.000 euros to less than 5.000 euros'}

			euros or more'; 'Total'}
Paid domestic service	To have or not to have paid domestic service	String	One of {'Yes, with domestic service'; 'No domestic service'; 'Total'}
Total	Number of people with or without paid domestic service	Integer	

**Tables 10.12. Description of the file internet\_connection.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Net monthly income level	Net monthly household income level	String	One of {'Less than 1.000 euros'; 'From 1.000 euros to less than 1.500 euros'; 'From 1.500 euros to less than 2.000 euros'; 'From 2.000 euros to less than 3.000 euros'; 'From 3.000 euros or more'; 'Total'}
Internet connection	Type of internet connection	String	One of {'Fixed connection'; 'Mobile connection'; 'Fixed and mobile connection'; 'No connection'; 'Total'}
Total	Number of households according to type of internet connection available to them	Integer	

**Tables 10.13. Description of the file problems\_living\_area.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names

Net monthly income level	Net monthly household income level	String	One of {'Less than 1.000 euros'; 'From 1.000 euros to less than 1.500 euros'; 'From 1.500 euros to less than 2.000 euros'; 'From 2.000 euros to less than 3.000 euros'; 'From 3.000 euros or more'; 'Total'}
Problems in the area	Type of problems in the living area	String	One of {'External noise'; 'Pollution or bad smells'; 'Poor street cleanliness'; 'Poor communications'; 'Few green areas'; 'Crime'; 'Nuisance related to tourist activities or hotel and catering establishments'; 'Total (absolute values)'}
Total	Percentage of households according to the problems in the living area	Float	

**Tables 10.14. Description of the file covid\_data.csv**

Variable name	Description	Type	Values
Date	Cases: In cases prior to 11 May, the date of diagnosis is used, in its absence the date of declaration to the community and, in its absence, the key date (date used for statistics by the ACs). In cases after 10 May, in the absence of a diagnosis date, the key date1 is used. Hospitalisations, ICU admissions, deaths: hospitalised cases are represented by date of hospitalisation (failing this, the date of diagnosis, and failing this, the key date), ICU cases by date of admission to ICU (failing this, the date of diagnosis, and failing this, the key date) and deaths by date of death (failing this, the date of diagnosis, and failing this, the key date).	Datetime	DD/MM/YYYY
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names ('Not stated')
Sex	Sex of the case	String	One of {'Male', 'Female', 'Not stated'}
Age	Age of the case	String	One of {'0-9', '10-19', '20-29', '30-39', '40-49', '50-59', '60-69', '70-79', '80+'}
num_cases	Number of reported cases confirmed with a positive diagnostic test for active infection	Integer	

	(PDIA) as set out in the COVID-19 Early Detection, Surveillance and Control Strategy and in addition cases reported before 11 May that required hospitalisation, ICU admission or died with a clinical diagnosis of COVID-19, according to the case definitions in force at the time.		
num_hosp	Number of hospitalised cases	Integer	
num_icu	Number of cases admitted to ICU	Integer	
num-deaths	Number of deaths	Integer	

**Tables 10.15. Description of the file `employment_rates.csv`**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	4th quarter 2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Employment rates	Activity, unemployment and employment rates of the population	String	One of {'Activity rate'; 'Unemployment rate of the population'; 'Employment rate of the population'}
Total	Percentage of people in each employment rate	Float	

**Tables 10.16. Description of the file `commuting_time.csv`**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names

Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Age	Age of the participant	String	One of {'Less than 30 years old'; '30 to 49 years old'; '50 and over'; 'Total'}
Daily time	Time spent commuting to work/study per day	String	One of {'Less than 20 minutes'; 'Between 20 and 39 minutes'; 'Between 40 and 59 minutes'; 'Between 60 and 89 minutes'; '90 minutes or more'; 'Total'}
Total	Number of people according to time spent commuting to work/study per day	Integer	

**Tables 10.17. Description of the file satisfaction\_commuting\_time.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Age	Age of the participant	String	One of {'Less than 30 years old'; '30 to 49 years old'; '50 and over'; 'Total'}
Degree of satisfaction	Degree of satisfaction with daily commuting time	String	One of {'Dissatisfied'; 'Satisfied'; 'Very satisfied'; 'Total'}
Total	Number of people according to satisfaction with the time spent commuting to work/study each day	Integer	

**Tables 10.18. Description of the file unemployment\_benefits.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	String	One of {'nov-21'; 'dec-21'; 'Average 2021'}
Location	Spanish provinces, autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Male', 'Female', 'Total'}
Age	Age of the participant	String	One of {'16-19 years old'; '20-24 years old'; '25-29 years old'; '30-34 years old', '35-39 years old'; '40-44 years old; '45-49 years old'; '50-54 years old'; '55-59 years old'; '60 and over'; 'Total'}
Unemployment benefits	Number of people receiving unemployment benefits	Integer	

**Tables 10.19. Description of the file pensions.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	String	One of {'nov-21'; 'dec-21'; 'Average 2021'}
Location	Spanish provinces, autonomous communities and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Male', 'Female', 'Not stated', 'Total'}
Number of pensions	Number of pensions paid on the reference monthly payroll	Integer	
Average pension	Amount resulting from dividing the "Total payroll amount" (Total amount paid in the monthly payroll of contributory pensions of the Social Security System in the reference period) by the "Number of pensions" in the same reference period (€/month)	Float	

**Tables 10.20. Description of the file unpaid\_external\_support.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Net monthly income level	Net monthly income level	String	One of {'Less than 500 euros'; 'From 500 euros to less than 1.000 euros'; 'From 1.000 euros to less than 1.500 euros'; 'From 1.500 euros to less than 2.000 euros'; 'From 2.500 euros to less than 3.000 euros'; 'From 3.000 euros to less than 5.000 euros'; 'From 5.000 euros or more'; 'Total'}
Unpaid external support	To have or not to have unpaid external support	String	One of {'Yes, with support from family, relatives, friends, neighbours'; 'Yes, with support from others, e.g. social services or an NGO'; 'No unpaid external support'; 'Total'}
Total	Number of people with or without unpaid external support	Integer	

**Tables 10.21. Description of the file social\_support.csv**

Variable name	Description	Type	Values
Date	Time period to which the data refer to	Integer	2021
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
Sex	Sex of the participant	String	One of {'Both sexes'; 'Male'; 'Female'}
Age	Age of the participant	String	One of {'Less than 30 years old'; '30 to 39 years old'; '40 to 49 years old'; '50 to 59 years old'}

			years old'; '60 to 69 years old'; '70 to 79 years old'; '80 and over'; 'Total'}
With social support	To have or not to have social support	String	One of {'Yes'; 'No; 'Total'}
Total	Number of people with or without social support	Integer	

**Tables 10.22. Description of the file weather\_data.csv**

Variable name	Description	Type	Values
Date	Day on which weather data are recorded	Datetime	DD/MM/YYYY
Code	Weather code	String	
Station	Station name	String	
Location	Spanish provinces and autonomous cities in North Africa	Integer	ISO codes/names
altitude	Altitude of the station above sea level (m)	Float	
avet	Average daily temperature (°C)	Float	
prec	Daily precipitation from 07 to 07 (mm.lp = less than 0.1 mm)	Float	
mint	Minimum daytime temperature (°C)	Float	
minttime	Hour and minute of minimum temperature (UTC)	Datetime	HH:MM
maxt	Maximum temperature of the day (°C)	Float	
maxtime	Hour and minute of maximum temperature (UTC)	Datetime	HH:MM
dir	Maximum gust direction (tens of degree .99 = variable direction .88 = no data)	Float	
avespeed	Average wind speed (m/s)	Float	
gust	Maximum wind gust (m/s)	Float	

gusttime	Hour and minute of maximum gust (UTC)	Datetime	HH:MM
sun	Sunshine (hours)	Float	
maxpress	Maximum pressure at the station's reference level (hPa)	Float	
maxpresstime	Time of maximum pressure (rounded to the nearest whole hour) (UTC)	Datetime	HH:MM
minpress	Minimum pressure at the station's reference level (hPa)	Float	
minpresstime	Time of minimum pressure (rounded to the nearest whole hour) (UTC)	Datetime	HH:MM